[11150/75]

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:	Examiner: Devona E. Faulk
Brian Michael FINN et al.	
For: DEVICE AND METHOD FOR OPERATING VOICE-SUPPORTED SYSTEMS IN MOTOR VEHICLES	Art Unit: 2615
Filed: July 18, 2003	
Serial No.: 10/623,286	

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APPEAL BRIEF PURSUANT TO 37 C.F.R. § 41.37

SIR:

On September 19, 2008, Appellants filed a Notice of Appeal from the last decision of the Examiner contained in the Final Office Action dated March 19, 2008 in the above-identified patent application.

In accordance with 37 C.F.R. § 41.37, this brief is submitted in support of the appeal of the rejection of claims 1 to 4 and 9 to 34. For at least the reasons set forth below, the rejection of claims 1 to 4 and 9 to 34 should be reversed.

1. REAL PARTY IN INTEREST

The real party in interest in the present appeal is VOLKSWAGEN AG of Wolfsburg, Federal Republic of Germany, which is the assignee of the entire right, title and interest in and to the present application.

2. RELATED APPEALS AND INTERFERENCES

There are no other prior or pending appeals, interferences or judicial proceedings known by the undersigned, or believed by the undersigned to be known to

Appellants or the assignee, VOLKSWAGEN AG, "which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal."

3. STATUS OF CLAIMS

Claims 1 to 34 are pending.

Claims 5, 7 and 8 stand allowed.

Claims 1 to 4, 6, 9, 10 and 25 to 34 stand provisionally rejected on the ground of nonstatutory double patenting over claims 1 to 4 and 29 to 36 of copending U.S. Patent Application No. 10/360,889.

Claims 1 to 4 and 25 to 34 stand rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,442,712 ("Kawamura et al.").

Claims 9 and 10 stand rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Kawamura et al. and U.S. Patent No. 6,125,187 ("Hanajima et al.").

Claims 11 to 24 stand rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Kawamura et al. and U.S. Patent No. 6,252,969 ("Ando").

A copy of the appealed claims, *i.e.*, claims 1 to 4 and 9 to 34, is attached hereto in the Claims Appendix.

4. STATUS OF AMENDMENTS

In response to the Final Office Action dated March 19, 2008, Appellants submitted a "Reply Under 37 C.F.R. § 1.116" ("the Reply") on August 26, 2008. No proposed amendments to the claims were included in the Reply. It is Appellants' understanding that the claims as included in the annexed "Claims Appendix" reflects the current claims.

5. SUMMARY OF CLAIMED SUBJECT MATTER

The present claims on appeal include seven independent claims, *i.e.*, claims 1, 3, 4, 26, 29 and 30.

Independent claim 1 relates to a method for operating a voice-supported system in a motor vehicle. *Specification*, page 1, lines 2 to 7. Claim 1 recites that the voice-supported system includes at least one microphone, at least one loudspeaker, and a bandpass filter arranged between the microphone and the loudspeaker. *Specification*, page 3, lines 5 to 15; Figure 2. Claim 1 recites that the method includes determining a power of a signal as a function of frequency. *Specification*, page 3, lines 5 to 15. Claim 1 further recites that the

method includes adjusting the bandpass filter at least as a function of a derivative of the power of the signal with respect to the frequency. *Specification*, page 3, lines 19 to 22.

Independent claim 3 relates to a method for operating a voice-supported system in a motor vehicle, the system including at least one microphone, at least one loudspeaker, and a bandpass filter arranged between the microphone and the loudspeaker, the method including determining a power of a signal as a function of frequency. *Specification*, page 3, lines 5 to 15; Figure 2. Claim 3 further recites that the method includes adjusting the bandpass filter at least one of as a function of at least one local maximum of the power of the signal as a function of the frequency and as a function of a derivative of the power of the signal with respect to frequency. *Specification*, page 3, lines 19 to 22. Claim 3 further recites that the method includes determining the local maximum of the power of the signal as a function of the derivative of the power of the signal with respect to frequency. *Specification*, page 3, lines 19 to 22.

Independent claim 4 relates to a method for operating a voice-supported system in a motor vehicle, the system including at least one microphone, at least one loudspeaker, and a bandpass filter arranged between the microphone and the loudspeaker, the method including determining a power of a signal as a function of frequency. *Specification*, page 3, lines 5 to 15; Figure 2. Claim 4 further recites that the method includes adjusting the bandpass filter at least one of as a function of at least one local maximum of the power of the signal as a function of the frequency and as a function of a derivative of the power of the signal with respect to frequency. *Specification*, page 3, lines 19 to 22. Claim 4 further recites that the method includes determining the local maximum of the power of the signal as a function of the first derivative of the power of the signal with respect to frequency. *Specification*, page 3, lines 19 to 22.

Independent claim 26 relates to a device for operating a voice-enhancement system. *Specification*, page 1, lines 2 to 7. Claim 26 recites the device including at least one microphone, at least one loudspeaker configured to reproduce a signal generated by the microphone, and a bandpass filter arranged between the microphone and the loudspeaker. *Specification*, page 3, lines 5 to 15; Figure 2. Claim 26 further recites the device including decision logic configured to adjust the bandpass filter at least as a function of a derivative of a power of the signal with respect to frequency. *Specification*, page 4, lines 1 to 10 and 15 to 18; page 12, lines 14 to 16.

Independent claim 29 relates to a device for operating a voice-enhancement system. *Specification*, page 1, lines 2 to 7. Claim 29 recites the device including at least one

microphone, at least one loudspeaker configured to reproduce a signal generated by the microphone, and a bandpass filter arranged between the microphone and the loudspeaker. *Specification*, page 3, lines 5 to 15; Figure 2. Claim 29 further recites the device including an arrangement configured to determine a power of the signal as a function of frequency. *Specification*, page 3, lines 5 to 15. Claim 29 further recites the device including an arrangement configured to adjust the bandpass filter at least as a function of a derivative of the power of the signal with respect to frequency. *Specification*, page 4, lines 1 to 10 and 15 to 18; page 12, lines 14 to 16.

Independent claim 30 relates to a device for operating a voice-enhancement system. *Specification*, page 1, lines 2 to 7. Claim 30 recites the device including at least one microphone, at least one loudspeaker configured to reproduce a signal generated by the microphone, and a bandpass filter arranged between the microphone and the loudspeaker. *Specification*, page 3, lines 5 to 15; Figure 2. Claim 30 further recites the device including means for determining a power of the signal as a function of frequency. *Specification*, page 3, lines 5 to 15; page 12, lines 10 to 14. Claim 30 further recites the device including means for adjusting the bandpass filter at least as a function of a derivative of the power of the signal with respect to frequency. *Specification*, page 4, lines 1 to 10 and 15 to 18; page 12, lines 14 to 16.

6. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims 1 to 4 and 25 to 34 are patentable under 35 U.S.C. § 102(b) over Kawamura et al.

Whether claims 9 and 10 are patentable under 35 U.S.C. § 103(a) over the combination of Kawamura et al. and Hanajima et al.

Whether claims 11 to 24 are patentable under 35 U.S.C. § 103(a) over the combination of Kawamura et al. and Ando.

7. ARGUMENTS

A. Rejection of Claims 1 to 4 and 25 to 34 Under 35 U.S.C. § 102(b)

Claims 1 to 4 and 25 to 34 stand rejected under 35 U.S.C. § 102(b) as anticipated by Kawamura et al. It is respectfully submitted that the present rejection should be reversed for at least the following reasons.

I. Claims 1, 2, 25 and 31

Claim 1, as set forth above, recites a method for operating a voice-supported system in a motor vehicle, the system including at least one microphone, at least one loudspeaker, and a bandpass filter arranged between the microphone and the loudspeaker, the method comprising determining a power of a signal as a function of frequency, and adjusting the bandpass filter at least as a function of a ***derivative*** of the power of the signal with respect to frequency.

Kawamura et al. does not disclose, or even suggest, adjusting a bandpass filter at least as a function of a ***derivative*** of the power of the signal with respect to frequency. Kawamura et al. describes, for example, at column 4, lines 22 to 59, determining a frequency of a howl based on the maximum power peak level of the signal. Once a howl frequency has been determined, the howl suppressor is adjusted to suppress the signal at the determined frequency. At no point in this procedure is a ***derivative*** of the power of the signal with respect to frequency used to adjust the bandpass filter. Kawamura et al. merely bases its howl suppressor adjustment on a power level of the signal.

The Final Office Action refers to the abstract of Kawamura et al. and column 5, lines 48 to 54, as disclosing this feature. The Final Office Action indicates that because Kawamura et al. discloses adjusting the howl suppressor based on a power of the microphone signal as a function of frequency, adjusting a bandpass filter at least as a function of a ***derivative*** of the power of the signal with respect to frequency is also disclosed. In an attempt to support this point, the Examiner has argued that a derivative represents an infinitesimal change in a function with respect to one of its variables. There is no mention by Kawamura et al. of an infinitesimal change. Furthermore, and as described above, Kawamura et al. describes adjusting a howl suppressor based on a power of the microphone signal as a function of frequency. Kawamura et al. does not disclose, or even suggest, adjusting a howl suppressor based on an ***infinitesimal change*** in the power of the microphone signal as a function of frequency. It is not a change in the power of the microphone signal that affects the determination of a howl frequency and therefore adjusting the howl suppressor. It is the power of the microphone signal as a function of frequency. Very clearly, the power of the signal and the derivative of the power of the signal are two different characteristics of a signal. Therefore, Kawamura et al. does not disclose, or even suggest, each and every feature of claim 1. Accordingly, it is respectfully submitted that Kawamura et al. does not anticipate claim 1.

As for dependent claims 2, 25 and 31 which ultimately depend from claim 1, it is respectfully submitted that Kawamura et al. does not anticipate these dependent claims for at least the reasons more fully set forth above in support of the patentability of claim 1.

In view of all of the foregoing, it is respectfully submitted that the present rejection should be reversed.

II. Claims 3 and 4

Claim 3, as set forth above, recites a method for operating a voice-supported system in a motor vehicle, the system including at least one microphone, at least one loudspeaker, and a bandpass filter arranged between the microphone and the loudspeaker, the method comprising determining a power of a signal as a function of frequency, adjusting the bandpass filter at least one of as a function of at least one local maximum of the power of the signal as a function of the frequency and as a function of a ***derivative*** of the power of the signal with respect to frequency, and determining the local maximum of the power of the signal as a function of the ***derivative*** of the power of the signal with respect to frequency. The Final Office Action refers to Kawamura et al., as applied to the like features in claim 1, as anticipating claim 3. For at least the reasons set forth above with respect to claim 1, Kawamura et al. does not disclose, or even suggest, adjusting a bandpass filter as a function of a ***derivative*** of the power of the signal with respect to frequency.

Further, Kawamura et al. does not disclose, or even suggest, determining the local maximum of the power of the signal as a function of the ***derivative*** of the power of the signal with respect to frequency. The Final Office Action refers to the abstract of Kawamura et al. as disclosing this feature. The abstract of Kawamura et al., however, merely describes maximum peak power levels compared to mean power levels to determine if the corresponding frequency is a howl that would need to be suppressed. Kawamura et al. describes processing of the maxima after the maxima are determined, but contains no disclosure regarding the determination of local maxima, and certainly contains no disclosure regarding determining the local maximum as a function of a ***derivative*** of the power of the signal with respect to frequency.

Claim 4 recites features substantially similar to those of claim 3. Therefore, Kawamura et al. does not disclose, or even suggest, each and every element of claims 3 and 4. For all of the foregoing reasons it is respectfully submitted that Kawamura et al. does not anticipate claims 3 and 4.

In view of all of the foregoing, it is respectfully submitted that the present rejection should be reversed.

III. Claims 26 to 28 and 32

Claim 26, as set forth above, relates to a device for operating a voice-enhancement system including at least one microphone, at least one loudspeaker configured to reproduce a signal generated by the microphone, a bandpass filter arranged between the microphone and the loudspeaker, and decision logic configured to adjust the bandpass filter at least as a function of a ***derivative*** of a power of the signal with respect to frequency. As more fully set forth above with respect to claim 1, Kawamura et al. does not disclose, or even suggest, a ***derivative*** of a power of the signal with respect to frequency. Therefore, Kawamura et al. also does not disclose or suggest decision logic configured to adjust a bandpass filter at least as a function of a ***derivative*** of a power of the signal with respect to frequency. Accordingly, it is respectfully submitted that Kawamura et al. does not anticipate claim 26.

As for dependent claims 27, 28 and 32 which depend ultimately from claim 26, it is respectfully submitted that Kawamura et al. does not anticipate these dependent claims for at least the reasons more fully set forth above in support of the patentability of claim 26.

In view of all of the foregoing, it is respectfully submitted that the present rejection should be reversed.

IV. Claims 29 and 33

Claim 29, as set forth above, relates to a device for operating a voice-enhancement system including at least one microphone, at least one loudspeaker configured to reproduce a signal generated by the microphone, a bandpass filter arranged between the microphone and the loudspeaker, an arrangement configured to determine a power of the signal as a function of frequency, and an arrangement configured to adjust the bandpass filter at least as a function of a ***derivative*** of the power of the signal with respect to frequency. As more fully set forth above with respect to claim 1, Kawamura et al. does not disclose, or even suggest, a ***derivative*** of a power of the signal with respect to frequency. Therefore, Kawamura et al. also does not disclose or suggest an arrangement configured to adjust a bandpass filter at least as a function of a ***derivative*** of a power of the signal with respect to

frequency. Accordingly, it is respectfully submitted that Kawamura et al. does not anticipate claim 29.

As for dependent claim 33 which depends ultimately from claim 29, it is respectfully submitted that Kawamura et al. does not anticipate this dependent claim for at least the reasons more fully set forth above in support of the patentability of claim 29.

In view of all of the foregoing, it is respectfully submitted that the present rejection should be reversed.

V. Claims 30 and 34

Claim 30, as set forth above, relates to a device for operating a voice-enhancement system including at least one microphone, at least one loudspeaker configured to reproduce a signal generated by the microphone, a bandpass filter arranged between the microphone and the loudspeaker, means for determining a power of the signal as a function of frequency, and means for adjusting the bandpass filter at least as a function of a ***derivative*** of the power of the signal with respect to frequency. As more fully set forth above with respect to claim 1, Kawamura et al. does not disclose, or even suggest, a ***derivative*** of a power of the signal with respect to frequency. Therefore, Kawamura et al. also does not disclose or suggest means for adjusting a bandpass filter at least as a function of a ***derivative*** of a power of the signal with respect to frequency. Accordingly, it is respectfully submitted that Kawamura et al. does not anticipate claim 30.

As for dependent claim 34 which depends ultimately from claim 30, it is respectfully submitted that Kawamura et al. does not anticipate this dependent claim for at least the reasons more fully set forth above in support of the patentability of claim 30.

In view of all of the foregoing, it is respectfully submitted that the present rejection should be reversed.

B. Rejection of Claims 9 and 10 Under 35 U.S.C. § 103(a)

Claims 9 and 10 stand rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Kawamura et al. and Hanajima et al. It is respectfully submitted that the present rejection should be reversed for at least the following reasons.

Claims 9 and 10 depend ultimately from claim 1, and therefore incorporate all of the features of claim 1. As more fully set forth above with respect to claim 1, Kawamura et al. does not disclose, or even suggest, all of the features of claim 1. Hanajima et al. does not cure the critical deficiencies of Kawamura et al. As such, the combination of Kawamura

et al. and Hanajima et al. does not disclose, or even suggest, all of the features of claim 1 or dependent claims 9 and 10. Accordingly, it is respectfully submitted that the combination of Kawamura et al. and Hanajima et al. does not render unpatentable claims 9 and 10.

In view of all of the foregoing, it is respectfully submitted that the present rejection should be reversed.

C. Rejection of Claims 11to 24 Under 35 U.S.C. § 103(a)

Claims 11 to 24 stand rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Kawamura et al. and Ando. It is respectfully submitted that the present rejection should be reversed for at least the following reasons.

I. Claims 11, 12, 19 to 24

Claims 11, 12, 19 to 24 depend from claim 1 and therefore incorporate all of the features of claim 1. As more fully set forth above with respect to claim 1, Kawamura et al. does not disclose, or even suggest, all of the features of claim 1. Ando does not cure the critical deficiencies of Kawamura et al. As such, the combination of Kawamura et al. and Ando does not disclose, or even suggest, all of the features of claim 1 or dependent claims 11, 12, 19 to 24. Accordingly, it is respectfully submitted that the combination of Kawamura et al. and Ando does not render unpatentable claims 11, 12, 19 to 24.

Further, with respect to claim 11, the Final Office Action acknowledges that Kawamura et al. fails to disclose the additional features of claim 11, wherein the bandpass filter is adjusted in the adjusting step to block a portion of the signal at a notch frequency only when a ratio at least of the power of the signal at a frequency at which the power of the signal is a maximum to an average value of the power of the signal at additional frequencies of the signal is greater than a feedback-power threshold. The Final Office Action refers to Ando at column 4, line 13 to column 5, line 36 as allegedly disclosing these features of claim 11. Ando, however, does not disclose the use of any ratio between values. Ando merely compares two power values to determine which value is larger, and by how much. As indicated at column 4, lines 58 to 65, "[w]hether the signal ... has a peak ... can be detected by detecting whether the power signal Pm of the center frequency band has a power which has difference D1F1 or D1F2 or over." Further still, Ando does not disclose the use of an average value of the power of the signal at additional frequencies of the signal. Ando does not disclose an average of any signal. Accordingly, Ando does not disclose, or even suggest, the bandpass filter is adjusted in the adjusting step to block a portion of the signal at a notch

frequency only when a ratio at least of the power of the signal at a frequency at which the power of the signal is a maximum to an average value of the power of the signal at additional frequencies of the signal is greater than a feedback-power threshold.

Further, with respect to claim 12, the Final Office Action admits that Kawamura et al. fails to disclose the additional features of claim 12, which are substantially similar to those of claim 11, but further incorporate a time-ratio-threshold. The Final Office Action relies on Ando for all of these features. As more fully set forth above with respect to claim 11, Ando does not disclose or suggest these features. Further, Ando does not disclose or suggest a time-ratio-threshold.

Further, with respect to claim 19, claim 19 depends from claim 11 and therefore incorporates all of the features of claim 11. Claim 19 is therefore allowable for at least the additional reasons set forth above with respect to claim 11. Further still, the Final Office Action acknowledges that Kawamura et al. fails to disclose the additional features of claim 19, the method including determining the feedback-power threshold as a function of an output signal of the bandpass filter, and again refers to Ando at column 4, line 13 to column 5, line 36 as allegedly disclosing this feature. Ando, however, merely describes thresholds with respect to the difference in power over adjacent frequency bands (D1F1 and D1F2) as well as an absolute value of the power signal (TL1). As described in column 4, lines 41 to 43, these values are "set in conformity with actual conditions of use of the loudspeaker system." Ando lacks any further disclosure regarding the setting of these values, and therefore lacks disclosure regarding setting any values as a function of an output signal of the bandpass filter.

Further, with respect to claims 21 and 22, claims 21 and 22 feature an average value of the power of the signal of further frequencies. As more fully set forth above with respect to claim 11, Ando does not disclose the use of an average value of the power of the signal at additional frequencies of the signal. Ando does not disclose an average of any signal.

In view of all of the foregoing, it is respectfully submitted that the present rejection should be reversed.

II. Claims 13 and 14

Claims 13 and 14 depend from claim 1 and therefore incorporate all of the features of claim 1. As more fully set forth above with respect to claim 1, Kawamura et al. does not disclose, or even suggest, all of the features of claim 1. Ando does not cure the

critical deficiencies of Kawamura et al. As such, the combination of Kawamura et al. and Ando does not disclose, or even suggest, all of the features of claim 1 or dependent claims 13 and 14. Accordingly, it is respectfully submitted that the combination of Kawamura et al. and Ando does not render unpatentable claims 13 and 14.

Further, with respect to claim 13, the Final Office Action acknowledges that Kawamura et al. fails to disclose the additional features of claim 13, which include similar features to those of claim 11, but further incorporate a combination of the power of the signal at a frequency at which the power of the signal is a maximum and the power of the signal at frequencies of the signal adjacent to the frequency at which the power of the signal is a maximum. The Final Office Action relies on Ando for all of these features. As more fully set forth above with respect to claim 11, Ando does not disclose or suggest these features. Further, Ando does not disclose or suggest the combination of signal powers featured in claim 13. In fact, Ando does not disclose or suggest any combination of signal powers.

Further, with respect to claim 14, the Final Office Action acknowledges that Kawamura et al. fails to disclose the additional features of claim 14, which include similar features to those of claim 13, but further incorporate a time-ratio-threshold. The Final Office Action relies on Ando for all of these features. As more fully set forth above with respect to claim 11, Ando does not disclose or suggest these features. Further, Ando does not disclose or suggest the combination of signal powers featured in claim 13, or a time-ratio-threshold.

In view of all of the foregoing, it is respectfully submitted that the present rejection should be reversed.

III. Claims 15 to 18

Claims 15 to 18 depend from claim 1 and therefore incorporate all of the features of claim 1. As more fully set forth above with respect to claim 1, Kawamura et al. does not disclose, or even suggest, all of the features of claim 1. Ando does not cure the critical deficiencies of Kawamura et al. As such, the combination of Kawamura et al. and Ando does not disclose, or even suggest, all of the features of claim 1 or dependent claims 15 to 18. Accordingly, it is respectfully submitted that the combination of Kawamura et al. and Ando does not render unpatentable claims 15 to 18.

Further, claims 15 and 17 feature substantially similar features to the features of claim 11, and is therefore allowable for at least the additional reasons set forth above with respect to claim 11. Further still, claims 15 and 17 feature a combination of the power of the signal at a frequency at which the power of the signal is a maximum and the power of the

signal at a frequency of the signal that is directly adjacent to the frequency at which the power of the signal is a maximum and at which the power is greater than at a frequency that is also directly adjacent to the frequency at which the power of the signal is a maximum. As more fully set forth above with respect to claim 13, Ando does not disclose or suggest any combination of signal powers.

Further, with respect to claims 16 and 18, the Final Office Action acknowledges that Kawamura et al. fails to disclose the additional features of claims 16 and 18, which include similar features to those of claims 15 and 17, but further incorporate a time-ratio-threshold. The Final Office Action relies on Ando for all of these features. As more fully set forth above with respect to claim 11, Ando does not disclose or suggest these features. Further, Ando does not disclose or suggest the combination of signal powers featured in claims 15 and 17, or a time-ratio-threshold.

In view of all of the foregoing, it is respectfully submitted that the present rejection should be reversed.

8. CLAIMS APPENDIX

A "Claims Appendix" is attached hereto and appears on the six (6) pages numbered "Claims Appendix 1" to "Claims Appendix 6."

9. EVIDENCE APPENDIX

No evidence has been submitted pursuant to 37 C.F.R. §§ 1.130, 1.131 or 1.132. No other evidence has been entered by the Examiner or relied upon by Appellants in the appeal. An "Evidence Appendix" is nevertheless attached hereto and appears on the one (1) page numbered "Evidence Appendix."

10. RELATED PROCEEDINGS APPENDIX

As indicated above in Section 2, above, "[t]here are no other prior or pending appeals, interferences or judicial proceedings known by the undersigned, or believed by the undersigned to be known to Appellants or the assignee, VOLKSWAGEN AG, 'which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.'" As such, there no "decisions rendered by a court or the Board in any proceeding identified pursuant to [37 C.F.R. § 41.37(c)(1)(ii)]" to be submitted. A "Related Proceedings Appendix" is nevertheless attached hereto and appears on the one (1) page numbered "Related Proceedings Appendix."

11. CONCLUSION

For at least the reasons indicated above, Appellants respectfully submit that the art of record does not disclose or suggest the subject matter as recited in the claims of the above-identified application. Accordingly, it is respectfully submitted that the subject matter as set forth in the claims of the present application is patentable.

In view of all of the foregoing, reversal of the rejection set forth in the Final Office Action is therefore respectfully requested.

Respectfully submitted,

Dated: April 17, 2009

By: /Clifford A. Ulrich/
Clifford A. Ulrich
Reg. No. 42,194

KENYON & KENYON LLP
One Broadway
New York, New York 10004
(212) 425-7200
CUSTOMER NO. 26646

CLAIMS APPENDIX

1. A method for operating a voice-supported system in a motor vehicle, the system including at least one microphone, at least one loudspeaker, and a bandpass filter arranged between the microphone and the loudspeaker, comprising:

determining a power of a signal as a function of frequency; and

adjusting the bandpass filter at least as a function of a derivative of the power of the signal with respect to frequency.

2. The method according to claim 1, wherein the voice-supported system includes at least one of a communications device, an intercom device, a two-way intercom device, and a duplex telephony device.

3. A method for operating a voice-supported system in a motor vehicle, the system including at least one microphone, at least one loudspeaker, and a bandpass filter arranged between the microphone and the loudspeaker, comprising:

determining a power of a signal as a function of frequency;

adjusting the bandpass filter at least one of as a function of at least one local maximum of the power of the signal as a function of the frequency and as a function of a derivative of the power of the signal with respect to frequency; and

determining the local maximum of the power of the signal as a function of the derivative of the power of the signal with respect to frequency.

4. A method for operating a voice-supported system in a motor vehicle, the system including at least one microphone, at least one loudspeaker, and a bandpass filter arranged between the microphone and the loudspeaker, comprising:

determining a power of a signal as a function of frequency;

adjusting the bandpass filter at least one of as a function of at least one local maximum of the power of the signal as a function of the frequency and as a function of a derivative of the power of the signal with respect to frequency; and

determining the local maximum of the power of the signal as a function of a first derivative of the power of the signal with respect to frequency.

6. A method for operating a voice-supported system in a motor vehicle, the system including at least one microphone, at least one loudspeaker, and a bandpass filter arranged between the microphone and the loudspeaker, comprising:

determining a power of a signal as a function of frequency; and

adjusting the bandpass filter at least one of as a function of at least one local maximum of the power of the signal as a function of the frequency and as a function of a derivative of the power of the signal with respect to frequency;

wherein the bandpass filter is adjusted in the adjusting step as a function of a first derivative of the power of the signal with respect to frequency.

9. The method according to claim 1, further comprising determining all local maxima in one frequency range.

10. The method according to claim 9, further comprising determining a global maximum in the frequency range.

11. The method according to claim 1, wherein the bandpass filter is adjusted in the adjusting step to block a portion of the signal at a notch frequency only when a ratio at least of the power of the signal at a frequency at which the power of the signal is a maximum to an average value of the power of the signal at additional frequencies of the signal is greater than a feedback-power threshold.

12. The method according to claim 1, wherein the bandpass filter is adjusted in the adjusting step to block a portion of the signal at a notch frequency only when a ratio at least of the power of the signal at a frequency at which the power of the signal is a maximum to an average value of the power of the signal at additional frequencies of the signal is greater than a feedback-power threshold for longer than a time-ratio-threshold.

13. The method according to claim 1, wherein the bandpass filter is adjusted in the adjusting step to block a portion of the signal at a notch frequency only when a ratio of the power of the signal at a frequency at which the power of the signal is a maximum plus the power of the signal at frequencies of the signal adjacent to the frequency at which the power of the signal is a maximum to an average value of the power of the signal at additional frequencies of the signal is greater than a feedback-power threshold.

14. The method according to claim 1, wherein the bandpass filter is adjusted in the adjusting step to block a portion of the signal at a notch frequency only when a ratio of the power of the signal at a frequency at which the power of the signal is a maximum plus the power of the signal at frequencies of the signal adjacent to the frequency at which the power of the signal is a maximum to an average value of the power of the signal at additional frequencies of the signal is greater than a feedback-power threshold for longer than a time-ratio-threshold.

15. The method according to claim 1, wherein the bandpass filter is adjusted in the adjusting step to block a portion of the signal at a notch frequency only when a ratio of the power of the signal at a frequency at which the power of the signal is a maximum plus the power of the signal at a frequency of the signal that is directly adjacent to the frequency at which the power of the signal is a maximum and at which the power is greater than at a frequency that is also directly adjacent to the frequency at which the power of the signal is a maximum to an average value of the power of the signal at additional frequencies of the signal is greater than a feedback-power threshold.

16. The method according to claim 1, wherein the bandpass filter is adjusted in the adjusting step to block a portion of the signal at a notch frequency only when a ratio of the power of the signal at a frequency at which the power of the signal is a maximum plus the power of the signal at a frequency of the signal that is directly adjacent to the frequency at which the power of the signal is a maximum and at which the power is greater than at a frequency that is also directly adjacent to the frequency at which the power of the signal is a maximum to an average value of the power of the signal at additional frequencies of the signal is greater than a feedback-power threshold for longer than a time-ratio-threshold.

17. The method according to claim 1, wherein the bandpass filter is adjusted in the adjusting step to block a portion of the signal at a notch frequency only when a ratio of the power of the signal at a frequency at which the power of the signal is a maximum plus the power of the signal at a frequency of the signal that is directly adjacent to the frequency at which the power of the signal is a maximum and at which the power is greater than at a frequency that is also directly adjacent to the frequency at which the power of the signal is a

maximum to an average value of the power of the signal of all further frequencies of the signal is greater than a feedback-power threshold.

18. The method according to claim 1, wherein the bandpass filter is adjusted in the adjusting step to block a portion of the signal at a notch frequency only when a ratio of the power of the signal at a frequency at which the power of the signal is a maximum plus the power of the signal at a frequency of the signal that is directly adjacent to the frequency at which the power of the signal is a maximum and at which the power is greater than at a frequency that is also directly adjacent to the frequency at which the power of the signal is a maximum to an average value of the power of the signal of all additional frequencies of the signal is greater than a feedback-power threshold for longer than a time-ratio-threshold.

19. The method according to claim 11, further comprising determining the feedback-power threshold as a function of an output signal of the bandpass filter.

20. The method according to claim 11, wherein the feedback-power threshold is between 20 and 50.

21. The method according to claim 1, wherein the bandpass filter is adjusted in the adjusting step to block a portion of the signal at a notch frequency only when a ratio of the power of the signal at a frequency at which the power of the signal is a maximum to an average value of the power of the signal at further frequencies at which the power of the signal includes a local maximum is greater than a power threshold.

22. The method according to claim 1, wherein the bandpass filter is adjusted in the adjusting step to block a portion of the signal at a notch frequency only when a ratio of the power of the signal at a frequency at which the power of the signal is a maximum to an average value of the power of the signal at all further frequencies at which the power of the signal includes a local maximum is greater than a power threshold.

23. The method according to claim 21, wherein the power threshold is one of between 20 and 50 and between 30 and 40.

24. The method according to claim 22, wherein the power threshold is one of between 20 and 50 and between 30 and 40.

25. The method according to claim 1, wherein the bandpass filter is adjusted in the adjusting step as a function of an output signal.

26. A device for operating a voice-enhancement system, comprising:

at least one microphone;

at least one loudspeaker configured to reproduce a signal generated by the microphone;

a bandpass filter arranged between the microphone and the loudspeaker; and

decision logic configured to adjust the bandpass filter at least as a function of a derivative of a power of the signal with respect to frequency.

27. The device according to claim 26, wherein the bandpass filter includes a filter bank having at least one notch filter.

28. The device according to claim 26, further comprising an arrangement configured to determine the power of the signal as a function of frequency.

29. A device for operating a voice-enhancement system, comprising:

at least one microphone;

at least one loudspeaker configured to reproduce a signal generated by the microphone;

a bandpass filter arranged between the microphone and the loudspeaker;

an arrangement configured to determine a power of the signal as a function of frequency; and

an arrangement configured to adjust the bandpass filter at least as a function of a derivative of the power of the signal with respect to frequency.

30. A device for operating a voice-enhancement system, comprising:

at least one microphone;

at least one loudspeaker for reproducing a signal generated by the microphone;

a bandpass filter arranged between the microphone and the loudspeaker;

means for determining a power of the signal as a function of frequency; and

means for adjusting the bandpass filter at least as a function of a derivative of the power of the signal with respect to frequency.

31. The method according to claim 1, wherein the bandpass filter is adjusted in the adjusting step as a function of the derivative of the power of the signal with respect to frequency and as a function of at least one local maximum of the power of the signal as a function of the frequency.

32. The device according to claim 26, wherein the decision logic is configured to adjust the bandpass filter as a function of the derivative of the power of the signal with respect to frequency and as a function of at least one local maximum of the power of the signal as a function of frequency.

33. The device according to claim 29, wherein the arrangement configured to adjust the bandpass filter is configured to adjust the bandpass filter as a function of the derivative of the power of the signal with respect to frequency and as a function of at least one local maximum of the power of the signal as a function of the frequency.

34. The device according to claim 30, wherein the bandpass filter adjusting means is for adjusting the bandpass filter as a function of the derivative of the power of the signal with respect to frequency and as a function of at least one local maximum of the power of the signal as a function of the frequency.

EVIDENCE APPENDIX

No evidence has been submitted pursuant to 37 C.F.R. §§1.130, 1.131, or 1.132. No other evidence has been entered by the Examiner or relied upon by Appellants in the appeal.

RELATED PROCEEDINGS APPENDIX

As indicated above in Section 2 of this Appeal Brief, "[t]here are no other prior or pending appeals, interferences or judicial proceedings known by the undersigned, or believed by the undersigned to be known to Appellants or the assignee, VOLKSWAGEN AG, 'which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.'" As such, there no "decisions rendered by a court or the Board in any proceeding identified pursuant to [37 C.F.R. § 41.37(c)(1)(ii)]" to be submitted.